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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,120	11/09/2001	Bing Zhou	15913.6.1	5527

7590 06/16/2004

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EXAMINER

JOHNSON, EDWARD M

ART UNIT PAPER NUMBER

1754

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,120

Applicant(s)

ZHOU ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 22-28 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 and 22-28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-16 and 35 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 and 30-34 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 20040317.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 6-7, and 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Lauder US 4,110,258.

Regarding claims 1 and 7, Lauder '258 discloses a catalyst compound for gaseous oxidation, reduction, and NO_x removal (see abstract and column 1, lines 11-17) having the general chemical formula ABO₃ (1:1 molar ratio of A and B), wherein A is 100% barium metal ions and B is up to 20% platinum metal ions with the balance of B being nonplatinum metal (see column 2, lines 42-54) such as iron, cobalt, or copper (see column 5, lines 19-22 and 43-44); wherein the compound has a crystal structure (abstract); dispersed on a binder having a surface area of about 200 square meters per gram (see column 7, lines 19-23); and wherein strontium and platinum may be the metals present (see Examples and column 6, line 44).

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Regarding claims 2, Lauder '258 discloses the general chemical formula ABO_3 , which has a 1:1 molar ratio of barium to platinum/nonplatinum metals (abstract).

Regarding claim 6, Lauder '258 discloses the catalyst dispersed on a binder having a surface area of about 200 square meters per gram (see column 7, lines 19-23).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lauder '258.

Regarding claims 3 and 5, Lauder '258 fails to specifically disclose the claimed ratio of Ba/La:Cu/Mn/Pt.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a 0.1:1 to 5:1 ratio of Ba:Cu/Mn/Pt in the catalyst of Lauder because Lauder discloses a 1:1 molar ratio of barium to platinum/nonplatinum metals (see above) wherein among the

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disclosed nonplatinum metals are preferably copper and manganese, which would lead one of ordinary skill to select those metals in the claimed ratio with a reasonable expectation of achieving a favorable result, since the disclosed ratio (1:1) is much more specific than the claimed ratio even though the disclosed range of possible metals is broader.

5. Claims 30-32 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lauder '258.

Regarding claims 30-32 Lauder '258 discloses a catalyst compound for gaseous oxidation, reduction, and NOx removal (see abstract and column 1, lines 11-17) having the general chemical formula ABO_3 (1:1 molar ratio of A and B), wherein A is 100% barium metal ions and B is up to 20% platinum metal ions with the balance of B being nonplatinum metal (see column 2, lines 42-54) such as iron, cobalt, or copper (see column 5, lines 19-22 and 43-44); wherein the compound has a crystal structure (abstract); dispersed on a binder having a surface area of about 200 square meters per gram (see column 7, lines 19-23).

6. In the event any differences can be shown for the product of the product-by-process claims 30-32, as opposed to the product taught by Lauder '258, such differences would have been obvious to one of ordinary skill in the art at the time the

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invention was made as a routine modification of the product in the absence of a showing of unexpected results; see also *In re Thorpe*, 227 USPQ 964 (Fed.Cir. 1985).

Allowable Subject Matter

7. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 8-16 and 35 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: The molar ratio of adsorption to oxidation metals of 0.2:1 to 2:1 wherein the adsorption metal oxide is lanthanum and the oxidation meal oxide components are copper and manganese promoted with platinum in the bi-functional catalyst for adsorption and oxidation of the instant claim 4 would not have been obvious to one of ordinary skill in the art at the time the invention was made. It also would not have been obvious to one of ordinary skill in the art at the time the invention was made to mix the adsorption and oxidation function metal ion solutions together and dry at 500-800 degrees Celsius for 0.4-5 hours and then form and impregnate a second solution of oxidation and platinum in the method of the instant claims 8 and 12. The molar ratio of the claimed adsorption to oxidation

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metals of 1:3 to 1:6 in the bi-functional catalyst for NOx removal in fuel combustion gases also would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

10. Applicant's arguments filed 3/22/04 have been fully considered but they are not persuasive.

It is argued that in order to emphasize this difference, claims 1 and 7... containing nitrogen oxides. This is not persuasive because Lauder '258 discloses the product useful for both oxidation and reduction (see abstract).

It is argued that without being held to any specific theory... how it is formed. This is not persuasive because Applicant does not claim any particular "different crystalline structure" distinguished from that disclosed in Lauder '258. It is noted that the features upon which applicant relies (i.e., a "different crystalline structure" distinguished from that of Lauder '258) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is argued that as discussed during the Examiner Interview... distinguish over Lauder. This is not persuasive for the reasons above. Lauder '258 discloses the product useful for both oxidation and reduction (see abstract).

It is argued that new independent claims 33 and 34... not disclosed in Lauder. This is not persuasive because both platinum and strontium are disclosed (see column 6, line 44).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.

EMJ


STEVEN BOS
PRIMARY EXAMINER
GROUP 1100